



March 17, 2015

TUV SUD BABT
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Attention: Director of Certification

RE: Analysis of RF Exposure for Portable and Mobile use per KDB 447498 D01 Mobile Portable RF Exposure v05r02 and RSS-102 Issue 4 March 2010

IC: 8454A-M3660123
FCC ID: RIASJMRFC

1. Portable exposure SAR Exemption Calculation using a 5mm separation distance:

As per Clause 4.3.1.1 of KDB 447498 D01 v05r02:

$$\left(\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min.test separation distance, mm}} \right) \times (\sqrt{f \text{ (GHz)}}) \leq 3.0$$

$$\left(\frac{0.77 \text{ mW}}{5 \text{ mm}} \right) \times (\sqrt{2.402 \text{ (GHz)}}) \leq 3.0$$

$$0.24 \leq 3.0 \text{ (complies)}$$



2. Mobile MPE Calculation using a 20cm separation distance:

Using Power Density formula:

$$S = \frac{PG}{4\pi R^2}$$

where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to isotropic

R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	1.87	(dBm)
Maximum peak output power at antenna input terminal:	1.54	(mW)
Antenna gain (typical):	-11.5	(dBi)
Maximum antenna gain:	0.071	(numeric)
Prediction distance:	20	(cm)
Source Based Time Average Duty Cycle:	100	(%)
Prediction frequency:	2402	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1.000	(mW/cm ²)
Power density at prediction frequency:	0.000022	(mW/cm ²)
Power density at prediction frequency:	0.000217	(W/m ²)
Margin of Compliance:	-46.64	(dB)

Sincerely,


Alex Chang

Name

Authorized Signatory

Title: EMC/Wireless Test Engineer